

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE PCT NATIONAL STAGE APPLICATION OF
THREEWIT, ET AL.

Art Unit: 1616
Examiner: Soroush, Ali

INTERNATIONAL APPLICATION NO: PCT/IB03/03132 Conf. No. 5091

IA Filing Date: June 10, 2003

U.S. Appln No.: 10/520,367

§ 371 Date: January 6, 2005

For: WEED CONTROL PROCESS COMPRISING THE APPLICATION OF
MESOTRIONE AND A SECOND HERBICIDE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated below:

The rejections of claims 1 – 3 and 5 – 8 under 35 USC §103 as being unpatentable over (1) WO/02100173 (Cornes) in view of Kent et al.; and (2) US 6,723,681 (Hacker et al.) in view of Kent et al., are in error since there is insufficient evidence to support the Examiner's contention of obviousness.

Applicants refer to their remarks in the communication dated 29 November 2006 for a complete explanation. In summary, the subject matter of the instant claims is **a process for reducing injury in a crop comprising sorghum** from application of a herbicidally effective amount of mesotrione to control weeds in the sorghum crop by applying the mesotrione along with a second herbicide – the second herbicide recited in the claims has been shown to act as a “safener” for mesotrione use in sorghum (as discussed on pages 1 and 2 of the specification).

Cornes:

The teaching of Cornes is limited to a herbicidal composition comprising mesotrione and a second herbicide for controlling weeds in crops such as corn (maize), wheat, rice, potato or sugarbeet. Cornes contains **no** specific and unambiguous **teaching** regarding the control of weeds in **sorghum** crops. **Nor** does Cornes suggest that **injury to sorghum** occasioned by use of **mesotrione** to control weeds can be reduced by use of a second herbicide.

Hacker:

The teaching of Hacker et al. is limited to herbicidal combinations (A)+(B) useful for controlling weeds in cereal crops that are tolerant to the herbicides (A) and (B), wherein (A) is a broad spectrum non-selective herbicide such as glyphosate and (B) is a selective herbicide,. The reference provides a long list of selective herbicides (B) that incidentally includes mesotrione. However, Hacker et al. does not teach or suggest the presently claimed invention.

To the contrary, **Hacker et al. teaches away** from the presently claimed process as the reference exemplifies wild cereal forms of Sorghum spp. as weed species to be controlled by the herbicide compositions therein:

Examples of weed species on which the herbicidal compositions act efficiently are, from amongst the monocots, Alopecurus spp., Avena spp., Setaria spp., Apera spica venti, Digitaria spp., Lolium spp. and Phalaris spp., but also Brachiaria spp., Panicum spp., Agropyron spp., **wild cereal forms, Sorghum spp.**, Echinochloa spp., Cynodon spp., Poa spp., and Cyperus species and Imperata. (Col. 13, lines 17 – 23). Emphasis added.

Kent:

The deficiencies of the primary references are not remedied by the secondary reference. Kent et al. is merely cited for the proposition that sorghum is a cereal crop. Kent does not relate to weed control or crop safety (phytotoxicity) due to any herbicide applications, let alone application of mesotrione. The secondary reference provides no teaching or suggestion which would lead one of ordinary skill to modify either of Cornes or Hacker et al. in order to arrive at the presently claimed invention (a process for reducing injury in a crop comprising sorghum from application of a herbicidally effective amount of mesotrione to control weeds in such crop). There is **no reasonable expectation of success** in making either of the proposed combinations: (1) Cornes – Kent or (2) Hacker – Kent.

It is respectfully submitted that the Examiner's reference on page 7 of the Final Rejection to MPEP 2112 is not germane to the present process claims. In addition, the Examiner's statement on page 8 of the Final Rejection that "the use of a composition comprising mesotrione and a second herbicide (dicamba) on the genus, cereal crops, would have made the use of said composition on any species of the genus including sorghum obvious" is unduly speculative and is unsupported by any evidence. Nothing in Cornes, Hacker or Kent, taken alone or in any combination, suggest a way to reduce the phytotoxic effects of mesotrione on sorghum.

Evidence of Unexpected Results:

Applicants respectfully submit that in reaching a conclusion of obviousness, the Patent and Trademark Office must consider the "invention as a whole," which includes evidence of the invention's unexpected results. See *In re Margolis*, 228 USPQ 940 (Fed. Cir. 1986). Specifically, as is indicated in tables 1 and 2 of the present application, the use of mesotrione along with one or more specific second herbicides provides reduced damage to sorghum as compared with the use of a composition comprising mesotrione alone. This finding, to which the present invention relates, is completely unexpected and could not be predicted on the basis of the prior art documents cited by the Examiner – since they are all silent in this regard. It is respectfully submitted that the Examiner has not accorded proper weight to this evidence of record.

A favorable reconsideration of the rejection is respectfully requested.

Respectfully submitted,

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